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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,234	02/11/2004	James G. Hermerding	42P18596	4501

8791 7590 03/08/2007  
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EXAMINER
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BANKHEAD, GENE LOUIS

ART UNIT	PAPER NUMBER
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3744

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/777,234

Applicant(s)

HERMERDING, JAMES G.

Examiner

Gene L. Bankhead

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09/06/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-34 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on February 11, 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

## **FINAL REJECTION**

### ***Response to Arguments***

Applicant's arguments, filed 09/06/2006, with respect to the rejection(s) of claim(s) under 1-18 and 20-34 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Beitelmal et al. (US 2003/0053293), Patel et al. (US 6134108) and Olarig et al. (US 6639794).

### ***Claim Objections***

Claims 1-34 are objected to because of the following informalities:

The recitation of "a vent valve" is presumed to be --one or more vent valves-- to provide proper antecedent basis for the depending claims therefrom. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 6-8, 14-17, 24-26 and 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Beitelmal et al. (US 2003/0053293).

Regarding claims 1, 2, 7 and 8 Beitelmal et al. teach a method of operating a cooling system wherein a cooling requirement of a computing system is determined and

a plurality of vent valves 42 of the cooling system are controlled by a valve controller 44 to adjust the flow of external ambient air for the computing system based on the cooling requirement (paragraphs 0007, 0018 and 0019).

Regarding claims 15-17 Beitelmal et al. teach a computing system with a housing having surfaces defining vent apertures (see Figure 1) and further teach a cooling system wherein a cooling requirement of a computing system is determined and a plurality of vent valves 42 of the cooling system are controlled by a valve controller 44 to adjust the flow of external ambient air for the computing system based on the cooling requirement (paragraphs 0007, 0018 and 0019).

In regard to claims 6 and 26, Beitelmal et al. teach all limitations of claim 1 and 15 and further teach the determining is done for a server (paragraph 22 lines 9-10).

With regard to claims 14 and 24, Beitelmal et al. teach all limitations of claim 7 and 15 and further teach the vent valves include a movable airflow barrier (paragraph 0028 lines 14-19) and that the valve and barrier can controlled by an electronically operated valve controller 44 with a motor (paragraph 0028 and 0039).

Regarding claim 25, Beitelmal et al. teach all limitations of claim 15 and further teach the vent valves include a movable airflow barrier (paragraph 0028 lines 14-19). They further teach the valve and barrier **may** be, but does not have to necessarily be controlled by an electronically operated valve controller 44 (paragraph 0028). Thus it is inherent if the valve is not controlled electronically it is controlled manually.

Regarding claims 30 and 31 Beitelmal et al. teach a machine readable medium wherein a cooling requirement of a computing system is determined and a plurality of

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vent valves 42 of the cooling system are controlled by a valve controller 44 to adjust the flow of external ambient air for the computing system based on the cooling requirement (paragraphs 0007, 0018 and 0019).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5,9,11,12,18,21,22,28-29, and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beitelmal et al. (US 2003/0053293) in view of Patel et al. (US 6134108).

Regarding claims 3-5,9,11,12,18,21,22,28-29, and 32-34 Beitelmal et al. teach all limitations of claims 1,7,16 and 30, they however fail to teach when the system cooling requirement indicates a need for increased cooling of a first set components, the controlling includes increasing airflow to the first set of components and decreasing airflow to a second set of components. Patel et al. teach a method of cooling an electronic computer wherein airflow is increased to a first set of components and decreased to a second set of components based on the amount of power generated by the components and the need for cooling (column 1 lines 10-15, 20-33, and 51-68 and column 2 lines 60-68). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Beitelmal et al. with Patel et al. to advantageously

ensure that only the necessary amounts of air needed to cool a component are supplied to it based on component operational state and power requirements. For different system components require different amounts of air to cool (some require more air others require less). This ensures that excessive amounts of energy are not wasted in cooling each component with the same amount of air.

Claims 13 and 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Beitelmal et al. (US 2003/0053293) in view of Potter (US 2079263).

With regard to claims 13 and 23, Beitelmal et al. teach all limitations of claims 7 and 15 further teach the vent valves include a movable airflow barrier (paragraph 0028 lines 14-19) and that the valve and barrier can be controlled by an electronically operated valve controller 44 (paragraph 0028). Though Beitelmal do not explicitly teach a solenoid coil, Potter teaches a solenoid coil 34 on a refrigerant expansion valve used to vary the flow of fluid through a refrigeration system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Beitelmal et al. with a solenoid valve Potter teaches it is well known in the art solenoid valves are used to pulsate the frequency of fluid flow through valves for varying flow rates.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beitelmal et al. (US 2003/0053293) in view of Olarig et al. (US 6639794).

With regard to claim 10, Beitelmal teaches all limitations of claim 8 as previously stated. Beitelmal fails to teach a fan chassis for the plurality of vent valves. Olarig et al. teach an electronic system wherein a fan chassis with surfaces defining vent openings and airflow dividers electrically coupled to a system fan controller to adjust the fan

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according to system cooling requirements (column 2 lines 33-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Beitelmal et al. with Olarig et al. to advantageously allow for cooling of components using both a fan and airflow divider. This would reduce the energy consumption of the vent valves because fans are to provide more cooling than vents and thus able to cool more quickly than vent covers.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beitelmal et al. (US 2003/0053293).

Beitelmal et al. teach all limitations of claim 15 and further teach the vent valves include a movable airflow barrier (paragraph 0028 lines 14-19). They further teach the valve and barrier **may** be, but does not have to necessarily be controlled by an electronically operated valve controller 44 (paragraph 0028). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an airflow barrier that can be controlled either manually or electronically to reduce energy consumption of the vent valves to avoid using electrical energy and thus conserve power expenditure of the vent valves. It requires no power to manually adjust an airflow barrier.

***Allowable Subject Matter***

Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gene L. Bankhead whose telephone number is (571)-272-8963. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571)-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



CHERYL TYLER  
SUPERVISORY PATENT EXAMINER

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